

Contents

VOLUME 113 (1992)

(Abstracted/Indexed in: *Biol. Abstr.*, *Chem. Abstr.*, *Curr. Contents AB & ES*, *Environ. Period. Bibliogr.*, *Excerpta Med.*, *Focus On: Global Change*, *Geo Abstr.*, *Oceanogr. Lit. Rev.*, *PASCAL/CNRS*, *Selected Water Resour. Abstr.*)

Special Issue: Humic Substances. Selected Papers presented at the Symposium on Humic Substances: Geochemistry, Structure, Agricultural and Environmental Role, and Industrial Utilization held at the 198th Meeting of the American Chemical Society in Miami Beach, Florida, 10-15 September 1989

Editor's Foreword	ix
The geochemical nature and agricultural importance of commercial humic matter J.C. Lobartini, K.H. Tan, J.A. Rema, A.R. Gingle, C. Pape and D.S. Himmelsbach (Athens, GA)	1
Stimulation of anaerobic digestion with peat humic substance H. A. Hartung (West Collingswood, NJ)	17
Characterization of humic substances formed during the composting of solid wastes from wineries Y. Inbar, Y. Hadar and Y. Chen (Rehovot, Israel)	35
Nitrohumic acids from Victorian brown coal A.F. Patti, T.V. Verheyen, L. Douglas and X. Wang (Churchill and Parkville, Australia)	49
Ammonia fixation by humic substances: a nitrogen-15 and carbon-13 NMR study K.A. Thorn and M.A. Mikita (Denver, CO; Bakersfield, CA)	67
Aliphatic components of forest soil organic matter as determined by solid-state ¹³ C NMR and analytical pyrolysis I. Kögel-Knabner, P.G. Hatcher, E.W. Tegelaar and J.W. de Leeuw (Bayreuth, Germany; University Park, PA; Delft, The Netherlands)	89
The application of NMR to organic matter inputs and processes in forest ecosystems of the Pacific Northwest C.M. Preston (Victoria, Canada)	107
Functional group content of soil and sedimentary humic acids determined by CP/MAS ¹³ C NMR related to conditional Zn ²⁺ and Cd ²⁺ formation constants D.F. Cameron and M.L. Sohn (Melbourne, FL)	121
Studies on the nature of sulphur in peat humic acids from the Fraser River Delta, British Columbia L.E. Lowe (Vancouver, Canada)	133
Significance of Mn(IV) oxide in the abiotic ring cleavage of pyrogallol in natural environments M.C. Wang and P.M. Huang (Saskatoon, Canada)	147
Chemical characterization of size-fractionated humic and fulvic materials in aqueous samples N.A. Marley, J.S. Gaffney, K.A. Orlandini, K.C. Picel and G.R. Choppin (Argonne, IL; Tallahassee, FL)	159
Comparison of soil fulvic acids using synchronous scan fluorescence spectroscopy, FTIR, titration and metal complexation kinetics H.H. Patterson, C.S. Cronan, S. Lakshman, B.J. Plankey and T.A. Taylor (Orono, ME)	179
 <i>Regular Papers</i>	
Experiments on the effects of several factors on the 1-hydroxypyrene level in human urine as an indicator of exposure to polycyclic aromatic hydrocarbons Z.-H. Zhao, W.-Y. Quan and D.-H. Tian (Beijing, China)	197

Hydrocarbons and fatty acids in surficial sediments (French Mediterranean coastal zones)	
G. Mille, T. El Jammal, P. Doumenq and J.C. Bertrand (Marseille, France).....	209
Strengthening the Montreal Protocol: does it cool down the greenhouse?	
M.G.J. den Elzen, R.J. Swart and J. Rotmans (Bilthoven, The Netherlands)	229
The isotopic composition of lead in man and the environment in Finland 1966-1987: isotope ratios of lead as indicators of pollutant source	
M. Keinonen (Helsinki, Finland)	251
Distribution, accumulation and depuration of administered lead in adult honeybees	
H. Raes, R. Cornelis and U. Rzeznik (Ledeganckstraat and Ghent, Belgium)	269
Isolation and characterization of a haloorganic soil humic acid	
C. Grøn and B. Raben-Lange (Lyngby and Frederiksberg, Denmark)	281
Influence of zeolite on the availability of radiocaesium in soil to plants	
M.A. Shenber and K.J. Johanson (Uppsala, Sweden)	287
<i>Author Index</i>	297
<i>Subject Index</i>	298
<i>Contents (Volume 113, 1992)</i>	301

